

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

**AMENDMENT**

**In the CLAIMS:**

Please amend the Claims as follows. Please cancel Claims 14-22.

These claims were the subject of a Restriction Requirement imposed by Examiner Fleurantin mailed August 12, 2003 and were previously prosecuted resulting in a Notice of Allowability mailed December 2, 2003. Claims 1-13 and 23-25 in their original format remain in the Divisional Application.

The claim amendments are included to conform with the requirements of the Divisional Application but are not intended to abandon or waive any rights whatsoever or be any comment whatsoever on the claims.

**PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838**

1. **(Original)** A method for creating a vertical search engine, comprising:

receiving a list of a plurality of keywords to be used for the vertical search engine on a network device, wherein the list of keywords includes general and specific keywords for a selected subject;

processing the list of plurality of keywords to create a refined list of keywords, wherein the processing includes adding, subtracting or modifying automatically the list of plurality of keywords;

creating a plurality of first index files associated with a plurality of first data files by checking a plurality of domain names from a plurality of domain name files associated with a domain name system for a computer network, wherein the plurality of first index files include a plurality of pointers to the associated data files, and wherein the plurality of first data files include a plurality of entries including electronic information extracted from a plurality of web-sites associated with a plurality of active domain names from the plurality of domain name files;

creating a plurality of second index files with associated plurality of second data files by searching the plurality of first index files for keywords from the refined list of keywords, wherein the plurality of second index files include a plurality of pointers to the associated plurality of second data files, and wherein the plurality of second data files include a plurality of entries including electronic information extracted from a plurality of web-sites associated with the plurality of active domain names for keywords from the refined list of keywords;

**PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838**

verifying that entries in the plurality of second index files are appropriate for the selected subject;

creating a final index from the plurality of entries first index; and

making a vortal accessible on another network device via the computer network for the selected subject using the final index.

2. **(Original)** The method of Claim 1 further comprising a computer readable medium having stored therein instructions for causing a processor to execute the steps of the method.

3. **(Original)** The method of Claim 1 wherein the domain name system for the computer network includes the Domain Name System for the Internet.

4. **(Original)** The method of Claim 1 wherein the plurality of entries including electronic information extracted from a plurality of web-sites associated with a plurality of active domain names from the plurality of domain name files include a title, description, a uniform resource locator, or a pre-determined amount of electronic content associated with a web-site associated with an active domain name.

5. **(Original)** The method of Claim 1 wherein the processing step includes:

eliminating keywords that are too generic or have multiple meanings;

modifying keywords by adding alternative spellings or additional words; and

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

adding automatically synonyms for keywords to the list of plurality of keywords to create the refined list of keywords.

**6. (Original)** The method of Claim 1 wherein the step of creating a plurality of first index files includes:

opening a plurality of top-level domain name files associated with the domain name system for the computer network;

checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;

extracting domain names in the plurality of open top-level domain name files associated with active web-sites on the computer network;

storing the extracted domains names in a plurality of entries in a plurality of separate files, thereby creating a plurality of separate files including the plurality of entries; and

sorting each of the plurality of separate files based on a pre-determined sorting scheme to create a plurality of sorted separate files.

**7. (Original)** The method of Claim 6 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet domain name system.

**PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838**

8. **(Original)** The method of Claim 6 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-site is active.

9. **(Original)** The method of Claim 6 wherein the checking step includes extracting electronic content from an active web-site on the computer network.

10. **(Original)** The method of Claim 6 wherein the extracting step includes:

- (a) adding a first individual character component to a first file based on the first character of an entry, when the first individual character component was derived from an entry in one of the plurality of open top-level domain name files;
- (b) moving the first character of the first individual character component to an end of the first individual character component, thereby exposing a next character and creating a next individual character component;
- (c) adding the next individual character component to a next file based on the next character of the first individual character component;
- (d) moving the next character of the next individual character component to an end of the next individual character component, thereby exposing a (next character+1) and creating a (next character+1) individual character component;
- (e) adding the (next character+1) individual character component to a (next character+1) file based on the (next character+1) of the (next character+1) individual

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

character component;

(f) repeating steps (d) and (e) until first character of the first individual character component is reached.

11. **(Original)** The method of Claim 6 wherein the storing step includes storing the plurality of individual character components in a plurality of separate files including one file for each letter of the English alphabet (A-Z), and the numbers zero through nine.

12. **(Original)** The method of Claim 6 wherein the sorting step includes sorting each of the plurality of separate files based on an ASCII value of characters stored in the plurality of separate files.

13. **(Original)** The method of Claim 1 wherein the step of creating a plurality of first index files includes:

- (a) selecting a keyword from the refined list of keywords;
- (b) determining whether the selected keyword comprises multiple words, and if so,
- (c) selecting a word with the greatest number of individual characters from the multiple words comprising the selected keyword,
- (d) opening a one of a plurality of sorted separate files based on a first character of the selected word from the selected keyword, wherein the plurality of sorted

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

separate file were created by indexing a plurality of domain name files associated with a domain name system for the refined list of keywords, and

(e) searching the open sorted separate file for the selected word from the selected keyword,

(f) repeating steps (c) through (e) for remaining words in the selected keyword;

and if not,

(g) opening a one of a plurality of sorted separate files based on a first character of the selected keyword, wherein the plurality of sorted separate file were created by indexing a plurality of domain name files associated with a domain name system for the refined list of keywords, and

(h) searching the open sorted separate file for the selected keyword;

(i) determining whether the selected keyword has been found in the open separate sorted, file, and if so,

(j) adding an entry to a first index file for the selected keyword;

(k) repeating steps (a), (b) and (i) for remaining keywords from the refined list of keywords.

14. **(Cancelled)** A method for indexing a plurality of domain name files, comprising:

opening a plurality of top-level domain name files associated with a domain name system for a computer network;

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;

parsing domain names in the plurality of open top-level domain name files associated with active web-sites on the computer network into a plurality of individual character components based on a pre-determined parsing scheme;

storing the plurality of individual character components in separate files, thereby creating a plurality of separate files including the plurality of individual character components; and

sorting each of the plurality of separate files based on a pre-determined sorting scheme to create a plurality of sorted separate files.

15. **(Canceled)** The method of Claim 14 further comprising a computer readable medium having stored therein instructions for causing a processor to execute the steps of the method.

16. **(Canceled)** The method of Claim 14 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet domain name system.

17. **(Canceled)** The method of Claim 14 wherein the domain name system for the

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

computer network includes the Domain Name System for the Internet.

18. **(Canceled)** The method of Claim 14 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-site is active.

19. **(Canceled)** A method for creating a plurality of index files, comprising:

opening a plurality of top-level domain name files associated with a domain name system for a computer network;

checking a plurality of domain names from the plurality of open top-level domain name files to determine whether any of the plurality of domain names are associated with an active web-site on the computer network;

extracting domain names in the plurality of open top-level domain name files associated with active web-sites on the computer network;

storing the extracted domains names in a plurality of entries in a plurality of separate files, thereby creating a plurality of separate files including the plurality of entries; and

sorting each of the plurality of separate files based on a pre-determined sorting scheme to create a plurality of sorted separate files.

20. **(Canceled)** The method of Claim 19 further comprising a computer readable

**PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838**

medium having stored therein instructions for causing a processor to execute the steps of the method.

21. **(Canceled)** The method of Claim 19 wherein the step of opening a plurality of top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet domain name system.

22. **(Canceled)** The method of Claim 19 wherein the checking step includes attempting to visit a web-site on the computer network with a software spider to determine whether the web-site is active.

23. **(Original)** A vertical search engine system, comprising in combination:  
a vertical search engine server with associated database for indexing and searching a plurality of top-level domain name files associated with a domain name system for a computer network for a selected list of keywords for a selected topic, for indexing and searching electronic content from a plurality of web-sites identified by a plurality of domain names from the plurality of top-level domain name files and for creating a vortal index from the indexed plurality of top-level domain name files and the electronic content from the plurality of web-sites; and  
a protocol stack on the vertical search engine server for communicating with other network devices on the computer network; and

PATENT  
PRELIMINARY AMENDMENT AND RESPONSE  
FOR REQUEST FOR DIVISIONAL APPLICATION OF 09/918,838

a server network device for making a vortal accessible on a network device via the computer network for a selected subject using the vertical index created by the vertical search engine server.

**24. (Original)** The vertical search engine system of Claim 23 top-level domain name files associated with a domain name system including opening a .COM, .EDU, .GOV, .MIL, .NET or .ORG top-level domain name file associated with the Internet Domain Name system.

**25. (Original)** The vertical search engine system of Claim 23 wherein the domain name system for the computer network includes the Domain Name System for the Internet.